an interaction between a BDP1 polypeptide and a natural binding partner, comprising the step of detecting the level of said interaction as an indication of said disease or condition.

25. (Amended) A method for treatment of an organism having a disease or condition characterized by an abnormality in a signal transduction pathway, wherein said signal transduction pathway includes an interaction between a BDP1 polypeptide and a natural binding partner, comprising the step of promoting or disrupting said interaction.

REMARKS

Claims 9-17 and 21-25 are pending. Claims 26 and 27 have been canceled in this amendment without prejudice or disclaimer of the claimed subject matter. Claims 9, 11, 13, 14, 15, 16, 21-24 have been amended.

Respectfully submitted,

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By

FOLEY & LARDNER
Customer Number: 22428
22428
PATENT TRADEMARK OFFICE
Telephone: (202) 672-5475
Facsimile: (202) 672-5399

Beth A. Burrous
Attorney for Applicant
Registration No. 35,087

Version with Markings to Show Changes Made

9. An isolated, enriched or purified **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide.

11. The polypeptide of claim 10, wherein said polypeptide comprises at least 12 contiguous amino acids present in the full length amino acid sequence shown in Figure **[1, 2,]** 3**[, 4 or 5]**.

13. An antibody or an antibody fragment having specific binding affinity to a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide.

14. The antibody of claim 13, wherein said polypeptide comprises at least 4 contiguous amino acids of the amino acid sequence shown in Figure **[1, 2,]** 3**[, 4 or 5]**.

15. A hybridoma which produces an antibody having specific binding affinity to a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide.

16. The hybridoma of claim 15, wherein said polypeptide comprises at least 25 contiguous amino acids present of the amino acid sequence shown in Figure **[1, 2,]** 3**[, 4 or 5]**.

21. A method of detecting a compound capable of binding to a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide, comprising the steps of incubating said compound with said polypeptide and detecting the presence of said compound bound to said polypeptide.

22. A method of identifying a compound capable of activating or inhibiting **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** protein phosphorylation activity wherein said method comprises the following steps:

adding a compound to a mixture containing a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide and a substrate for said protein; and

detecting a change in phosphorylation of said substrate.

23. A method of identifying compounds useful for diagnosis or treatment of an abnormal condition in an organism, wherein said abnormal condition is associated with an aberration in a signal transduction pathway characterized by an interaction between a polypeptide and a natural binding partner, wherein said polypeptide is a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide, comprising the following steps:

adding a compound to cells; and

detecting whether the compound promotes or disrupts said interaction between the polypeptide and a natural binding partner.

24. A method for diagnosis or a disease or condition characterized by an abnormality in a signal transduction pathway, wherein said signal transduction pathway includes an interaction between a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide and a natural binding partner, comprising the step of detecting the level of said interaction as an indication of said disease or condition.

25. A method for treatment of an organism having a disease or condition characterized by an abnormality in a signal transduction pathway, wherein said signal transduction pathway includes an interaction between a **[PTP20, PCP-2,]** BDP1**[, mCLK2, mCLK3, mCLK4 or SIRP]** polypeptide and a natural binding partner, comprising the step of promoting or disrupting said interaction.